

AMENDMENTS TO THE CLAIMS

1. (Currently amended) An actuating member for a railway vehicle brake assembly, the railway vehicle brake assembly having an air spring actuator incorporated therein, the air spring actuator having a pair of spaced apart end surfaces and at least one inflatable air bag spring defining an exterior peripheral surface of the air spring actuator, each of the pair of spaced apart end surfaces having a plurality of mounting members extending outwardly therefrom, said actuating member comprising:

(a) a first plate member disposed substantially vertically during use of said brake assembly, said first plate member having a first substantially planar surface thereof disposed in abutting relationship with one of the pair of spaced apart end surfaces of the air spring actuator, said first plate member exposing the exterior peripheral surface of the at least one inflatable air spring to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign material when the railway car mounted brake assembly is in use;

(b) a second plate member disposed substantially horizontally during use of the brake assembly, said second plate member directly attached to said first plate member at a bottom edge thereof and extending substantially perpendicular to said

first substantially planar surface of said first plate member for shielding at least a first portion of the exterior peripheral surface of the air spring actuator from said detrimental extraneous foreign material;

(c) a structure disposed on and attached to an opposed second surface of said first plate member for securing said actuating member to an actuating linkage of the railway vehicle brake assembly;

(d) a plurality of mounting apertures formed through a thickness of said first plate member, each of said plurality of mounting apertures operatively aligned with and sized to pass therethrough a respective one of the plurality of mounting members extending outwardly from the one of the pair of end surfaces; and

(e) ~~a pair of plate portions disposed planar with said first plate member adjacent a top edge thereof, each of said pair of plate portions protruding outwardly from a respective side edge of said first plate member~~ a third plate member having a first end thereof disposed on said first substantially planar surface of said first plate member adjacent each of said bottom edge and a side edge thereof, said third plate member extending substantially perpendicular to said first plate member in close proximity to an inner surface of said second plate member.

2. (Canceled).

3. (Canceled).

4. (Canceled).

5. (Previously presented) An actuating member, according to claim 1, wherein said structure attached to said opposed second surface of said first plate member for securing said actuating member to the actuating linkage of the railway vehicle brake assembly includes at least one plate member having an aperture formed therethrough and a pin member disposed in said aperture for securing said at least one plate member to the actuating linkage.

6. (Currently amended) A mounting member for mounting an air spring actuator to at least one brake beam of a railway car mounted brake assembly, the air spring actuator having a pair of spaced apart end surfaces and at least one inflatable air spring defining an exterior peripheral surface of the air spring actuator, each of the pair of spaced apart end surfaces having a

plurality of threaded fasteners extending outwardly therefrom, said mounting member comprising:

(a) a plate member disposed substantially vertically during use of the brake assembly, said plate member having a first substantially planar surface portion thereof disposed in abutting relationship with one of the pair of spaced apart end surfaces of the air spring actuator, said plate member further having a plurality of mounting apertures formed through a thickness thereof, each of said plurality of mounting apertures aligned with and sized to pass therethrough a respective one of the plurality of threaded fasteners extending outwardly from the one of the pair of end surfaces, said plate member exposing the exterior peripheral surface of the at least one inflatable air spring to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign material when the railway car mounted brake assembly is in use;

~~(b) a pair of elongated members, each of said pair of elongated members having a proximal end thereof disposed on and attached to said plate member adjacent one side edge of said plate member, said proximal end disposed transverse to a length of said each of said pair of elongated members, said each of said pair of elongated members extending outwardly from said first substantially planar surface of said plate member to cover~~

~~a portion of the peripheral surface of the air spring actuator~~
an elongated flange disposed, in a substantially horizontal
plane during use of said air spring actuator assembly, on an
opposed second substantially planar surface of said third plate
member between top and bottom edges thereof, said elongated
flange extending outwardly from said opposed second
substantially planar surface of said third plate member, wherein
a first end of said elongated flange is positioned at about one
side edge of said third plate member and wherein an opposed
second end of said elongated flange is positioned in proximity
to an opposed side edge of said third plate member; and

(c) ~~a structure disposed on and attached to an opposed~~
~~substantially planar surface of said plate member, said~~
~~structure attaching said mounting member to a rigid structure a~~
pair of apertures formed through a thickness of said elongated
flange in a spaced apart relationship along a length thereof;

(d) a support having one end thereof disposed on said
second end of said elongated flange, said support extending in
a direction towards said first plate member, wherein an opposed
end of said support is disposed forward of said first
substantially planar surface portion of said third plate member,
said support having a portion thereof disposed generally

horizontally when said mounting member is installed on the
railway car mounted brake assembly; and

(e) an aperture disposed in said opposed end of said
support.

7. (Canceled).

8. (Canceled).

9. (Previously presented) An air brake actuator assembly,
said air brake actuator assembly comprising:

(a) at least one air spring actuator having a pair of
spaced apart end surfaces and an exterior peripheral surface,
each of said pair of spaced apart end surfaces having a
plurality of mounting members extending outwardly therefrom,
wherein said exterior peripheral surface exposed to an
atmospheric operating environment characterized by a presence of
detrimental extraneous foreign material during use of said air
spring actuator assembly;

(b) a first plate member disposed substantially vertically
during use of said air brake actuator assembly, said first plate
member having a first substantially planar surface thereof
disposed in abutting relationship with one of said pair of

spaced apart end surfaces of said at least one air spring actuator, said first plate member further having a plurality of first mounting apertures formed through a thickness thereof, each of said plurality of first mounting apertures aligned with and sized to pass therethrough a respective one of said plurality of mounting members extending outwardly from said one of said pair of spaced apart end surfaces;

(c) a second plate member disposed substantially horizontally during use of said air brake actuator assembly, said second plate member directly attached to said first plate member at a bottom edge thereof and extending substantially perpendicular to said first substantially planar surface of said first plate member for shielding at least a first portion of said exterior peripheral surface of said at least one air spring actuator from said detrimental extraneous foreign material;

(d) a first structure securing said first substantially vertically disposed plate member to an actuating linkage of a railway vehicle brake assembly;

(e) a third plate member disposed substantially vertically during use of said air brake actuator assembly, said third plate member having a first planar surface portion thereof disposed in abutting relationship with an opposed one of said pair of spaced apart end surfaces of said at least one air spring actuator,

said third plate member further having a plurality of second mounting apertures formed through a thickness thereof, each of said plurality of second mounting apertures aligned with and sized to pass therethrough a respective one of said plurality of mounting members extending outwardly from said opposed one of said pair of end surfaces;

(f) a second structure disposed on an opposed substantially planar surface of said third plate member and attaching said air spring actuator assembly to a rigid structure;

(g) a pair of plate portions disposed planar with said first plate member adjacent a top edge thereof, each of said pair of plate portions protruding outwardly from a respective side edge of said first plate member;

(h) a pair of elongated members, each of said pair of elongated members having a proximal end thereof disposed on and attached to said third plate member adjacent one side edge thereof, said each of said pair of elongated members extending outwardly from said first substantially planar surface of said third plate member in a direction toward said first plate member; and

(i) abutment between a top edge of each of said pair of elongated members with an edge of a respective one of said pair

of plate portions during motion of said at least one air spring actuator.

10. (Previously presented) An air brake actuator assembly, according to claim 9, wherein said first structure includes a pair of second elongated members disposed substantially horizontally and spaced apart in a vertical plane during use of said air brake assembly, each of said pair of spaced apart second elongated members having a proximal end thereof disposed on and attached to an opposed substantially planar surface of said first plate member, a distal end thereof extending outwardly and substantially perpendicular to said first plate member, and an aperture formed through a thickness of said each of said pair of second elongated members adjacent to and spaced from said distal end thereof.

11. (Previously presented) An air brake actuator assembly, according to claim 9, wherein said air brake assembly further includes structure disposed therein for limiting reciprocal motion of said at least one air spring actuator during evacuation of air pressure from said at least one air spring actuator.

12. (Previously presented) An air brake actuator assembly, according to claim 11, wherein said structure for limiting reciprocal motion of said at least one air spring actuator is a rigid member disposed internally therewithin.

13. (Previously presented) An air brake actuator assembly, according to claim 9, wherein said air spring actuator further includes an air inlet in communication with said at least one air spring actuator.

14. (Canceled).

15. (Canceled).

16. (Previously presented) An air brake actuator assembly, according to claim 9, wherein said air spring actuator further includes a member for visual determination of a travel length of said air spring actuator.

17. (Previously presented) An air brake actuator assembly, according to claim 16, wherein said visual travel determination member is a linear measuring device.

18. (Previously presented) An air brake actuator assembly, according to claim 9, wherein said air brake actuator assembly further includes structure disposed therein for controlling volume of air in said at least one air spring actuator.

19. (Canceled).

20. (Canceled).

21. (Canceled).

22. (Canceled).

23. (Canceled).

24. (Canceled).

25. (Canceled).

26. (Previously presented) In combination with a railway car brake assembly, an air brake actuator assembly comprising:

(a) at least one air spring actuator having a pair of spaced apart end surfaces and an exterior peripheral surface,

each of said pair of spaced apart end surfaces having a plurality of mounting members extending outwardly therefrom, wherein said exterior peripheral surface exposed to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign material during use of said air spring actuator assembly;

(b) a first plate member disposed substantially vertically during use of said air brake actuator assembly, said first plate member having a first substantially planar surface thereof disposed in abutting relationship with one of said pair of spaced apart end surfaces of said at least one air spring actuator, said first plate member further having a plurality of first mounting apertures formed through a thickness thereof, each of said plurality of first mounting apertures aligned with and sized to pass therethrough a respective one of said plurality of mounting members extending outwardly from said one of said pair of spaced apart end surfaces;

(c) a second plate member disposed substantially horizontally during use of said air brake actuator assembly, said second plate member directly attached to said first plate member at a bottom edge thereof and extending substantially perpendicular to said first substantially planar surface of said first plate member for shielding a bottom portion of said

exterior peripheral surface of said at least one air spring actuator from said detrimental extraneous foreign material;

(d) a pair of elongated connecting members disposed substantially horizontally and spaced apart in a vertical plane during use of said air brake actuator assembly, each of said pair of spaced apart elongated connecting members having a proximal end thereof disposed on and attached to an opposed substantially planar surface of said first plate member, a distal end thereof extending outwardly and substantially perpendicular to said first plate member, and a pair of apertures, each of said pair of apertures formed in operative alignment through a thickness of a respective one of said pair of elongated connecting members adjacent to and spaced from said distal end thereof;

(e) a third plate member disposed substantially vertically during use of said air brake actuator assembly, said third plate member having a first planar surface portion thereof disposed in abutting relationship with an opposed one of said pair of spaced apart end surfaces of said at least one air spring actuator, said third plate member further having a plurality of second mounting apertures formed through a thickness thereof, each of said plurality of second mounting apertures aligned with and sized to pass therethrough a respective one of said plurality of

mounting members extending outwardly from said opposed one of said pair of end surfaces;

(f) a flange disposed, in a substantially horizontal plane during use of said air brake actuator assembly, on and extending outwardly from said opposed substantially planar surface of said third plate member;

(g) a pair of apertures formed through a thickness of said flange in a spaced apart relationship along a length thereof;

(h) a support extending outwardly from one side edge of said third plate member and having a portion thereof disposed generally horizontally during use of said at least one air spring actuator assembly;

(i) a tab extending downwardly from a bottom surface of said portion of said support;

(j) an aperture formed through a thickness of said tab;

(k) an aperture formed through a thickness of said third plate member in operative alignment with an inlet port of said at least one air spring actuator;

(l) a pair of plate portions disposed planar with said first plate member adjacent a top edge thereof, each of said pair of plate portions protruding outwardly from a respective side edge of said first plate member;

(m) a pair of elongated members, each of said pair of elongated members having a proximal end thereof disposed on and attached to said third plate member adjacent one side edge thereof, said each of said pair of elongated members extending outwardly from said first substantially planar surface of said third plate member in a direction toward said first plate member to cover a portion of the peripheral surface of said at least one air spring actuator;

(n) engagement between a top edge of each of said pair of elongated members with an edge of a respective one of said pair of plate portions during use of said at least one air brake actuator assembly;

(o) a plate portion extending from a top edge of one of said one of said pair of elongated members and defining an edge disposed generally perpendicular to said top edge of said one of said pair of elongated members; and

(p) abutment of said edge of said plate portion extending from said top edge of said one of said pair of elongated members with said first substantially planar surface of said first plate member to limit motion of said at least one air spring actuator.

27. (Previously presented) The air brake actuator assembly, according to claim 26, wherein said top edge of said each of

said pair of elongated members includes a wear resistant member, wherein a surface of said wear resistant member engages said edge of said respective one of said pair of plate portions during use of said air brake actuator assembly.

28. (Previously presented) The air brake actuator assembly, according to claim 26, wherein each of said pair of elongated members includes a flange extending inwardly from said top edge thereof, wherein a top surface of said flange of said each of said pair of elongated members engages said edge of said respective one of said pair of plate portions during use of said air brake actuator assembly.

29. (New) An air brake actuator assembly, said air brake actuator assembly comprising:

(a) at least one air spring actuator having a pair of spaced apart end surfaces and an exterior peripheral surface, each of said pair of spaced apart end surfaces having a plurality of mounting members extending outwardly therefrom, wherein said exterior peripheral surface exposed to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign material during use of said air spring actuator assembly;

(b) a first plate member disposed substantially vertically during use of said air brake actuator assembly, said first plate member having a first substantially planar surface thereof disposed in abutting relationship with one of said pair of spaced apart end surfaces of said at least one air spring actuator, said first plate member further having a plurality of first mounting apertures formed through a thickness thereof, each of said plurality of first mounting apertures aligned with and sized to pass therethrough a respective one of said plurality of mounting members extending outwardly from said one of said pair of spaced apart end surfaces;

(c) a second plate member disposed substantially horizontally during use of said air brake actuator assembly, said second plate member directly attached to said first plate member at a bottom edge thereof and extending substantially perpendicular to said first substantially planar surface of said first plate member for shielding at least a first portion of said exterior peripheral surface of said at least one air spring actuator from said detrimental extraneous foreign material;

(d) a first structure securing said first substantially vertically disposed plate member to an actuating linkage of a railway vehicle brake assembly;

(e) a third plate member disposed substantially vertically during use of said air brake actuator assembly, said third plate member having a first planar surface portion thereof disposed in abutting relationship with an opposed one of said pair of spaced apart end surfaces of said at least one air spring actuator, said third plate member further having a plurality of second mounting apertures formed through a thickness thereof, each of said plurality of second mounting apertures aligned with and sized to pass therethrough a respective one of said plurality of mounting members extending outwardly from said opposed one of said pair of end surfaces;

(f) a second structure disposed on an opposed substantially planar surface of said third plate member and attaching said air spring actuator assembly to a rigid structure;

(g) at least one plate portion disposed planar with said first plate member and protruding outwardly therefrom; and

(h) at least one elongated member having a proximal end thereof disposed on and attached to said first substantially planar surface of said third plate member, said at least one elongated member extending outwardly from said first substantially planar surface of said third plate member in a direction toward said first plate member, so that at least one

plate portion reciprocally travels along a length of said at least one elongated member.

30. (New) An air brake actuator assembly, said air brake actuator assembly comprising:

(a) at least one air spring actuator having a pair of spaced apart end surfaces and an exterior peripheral surface, each of said pair of spaced apart end surfaces having a plurality of mounting members extending outwardly therefrom, wherein said exterior peripheral surface exposed to an atmospheric operating environment characterized by a presence of detrimental extraneous foreign material during use of said air spring actuator assembly;

(b) a first plate member disposed substantially vertically during use of said air brake actuator assembly, said first plate member having a first substantially planar surface thereof disposed in abutting relationship with one of said pair of spaced apart end surfaces of said at least one air spring actuator, said first plate member further having a plurality of first mounting apertures formed through a thickness thereof, each of said plurality of first mounting apertures aligned with and sized to pass therethrough a respective one of said

plurality of mounting members extending outwardly from said one of said pair of spaced apart end surfaces;

(c) a second plate member disposed substantially horizontally during use of said air brake actuator assembly, said second plate member directly attached to said first plate member at a bottom edge thereof and extending substantially perpendicular to said first substantially planar surface of said first plate member for shielding at least a first portion of said exterior peripheral surface of said at least one air spring actuator from said detrimental extraneous foreign material;

(d) a first structure securing said first substantially vertically disposed plate member to an actuating linkage of a railway vehicle brake assembly;

(e) a third plate member disposed substantially vertically during use of said air brake actuator assembly, said third plate member having a first substantially planar surface portion thereof disposed in abutting relationship with an opposed one of said pair of spaced apart end surfaces of said at least one air spring actuator, said third plate member further having a plurality of second mounting apertures formed through a thickness thereof, each of said plurality of second mounting apertures aligned with and sized to pass therethrough a respective one of said plurality of mounting members extending

outwardly from said opposed one of said pair of end surfaces;
and

(f) an elongated flange disposed, in a substantially horizontal plane during use of said air spring actuator assembly, on an opposed second substantially planar surface of said third plate member between top and bottom edges thereof, said elongated flange extending outwardly from said opposed second substantially planar surface of said third plate member, wherein a first end of said elongated flange is positioned at about one side edge of said third plate member and wherein an opposed second end of said elongated flange is positioned in close proximity to an opposed side edge of said third plate member;

(g) a pair of apertures formed through a thickness of said elongated flange in a spaced apart relationship along a length thereof; and

(h) a support having one end thereof disposed on said second end of said elongated flange, said support extending in a direction towards said first plate member, wherein an opposed end of said support is disposed forward of said first substantially planar surface portion of said third plate member, said support having a portion thereof disposed generally

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horizontally when said mounting member is installed on the
railway car mounted brake assembly.